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Soil and Water Conservation News

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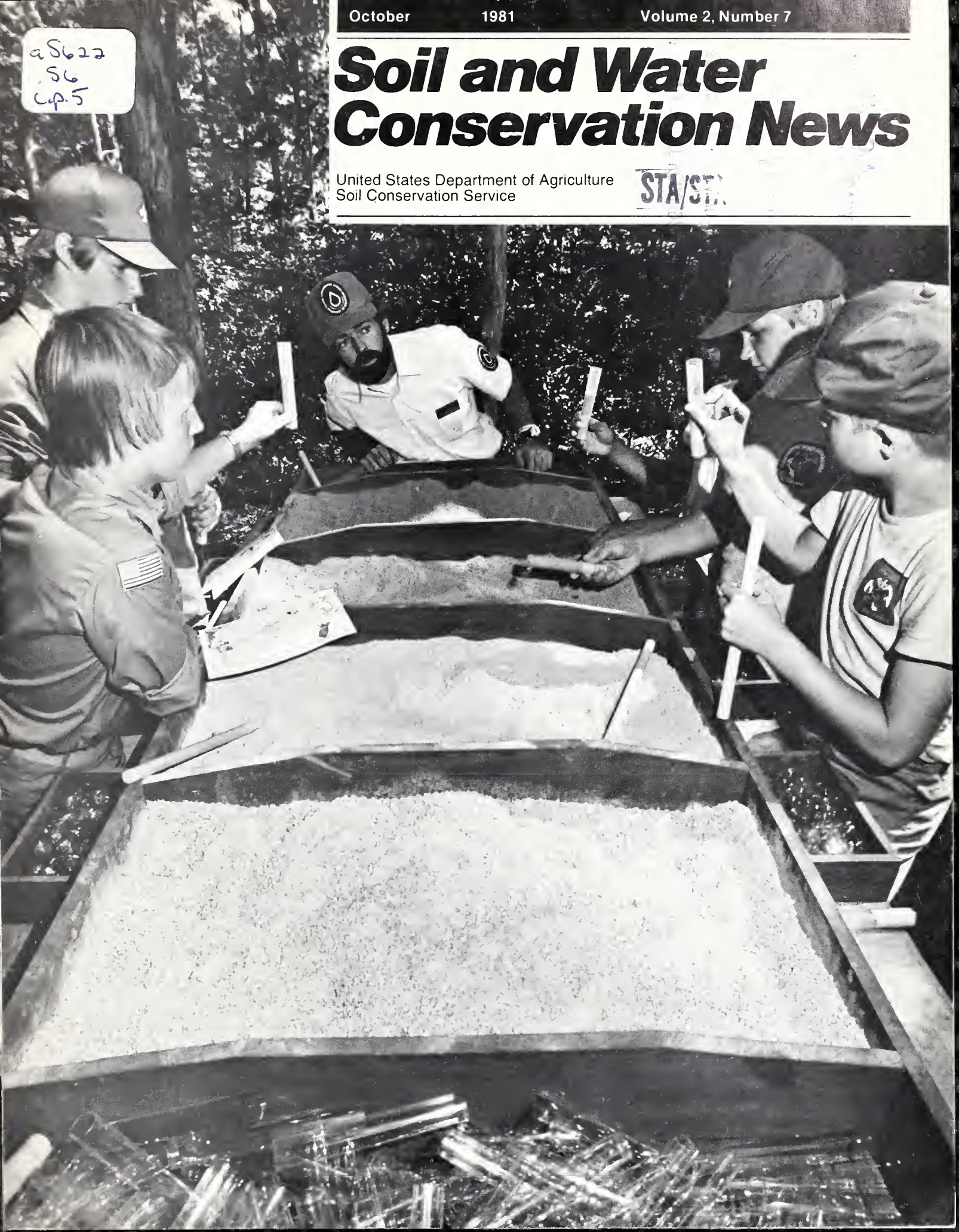

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Comments:

From the SCS Chief

This past spring the Soil Conservation Service issued a new statement of its overall mission: "to provide national leadership in the conservation and wise use of soil, water, and related resources through a balanced, cooperative program that protects, restores, and improves those resources."

One of the ways SCS is providing "national leadership" is by identifying resource priority needs through the appraisal process of the Soil and Water Resources Conservation Act of 1977. SCS also continues to lead the Nation's efforts to prevent soil erosion where current rates threaten long-term productivity. High priority is being given to reducing erosion where soil losses exceed T-value; reducing upstream flood damage; improving water supply, quality, and management; and retaining agricultural land, especially where opportunities to sustain and improve productivity are greatest.

The "conservation and wise use of soil, water, and related resources" are vital to our local, State, and national economies and social well-being. Landowners and land users must look at the short-term and long-term consequences of all land uses. Present soil erosion rates and the estimated conversion of 3 million acres of land to nonagricultural uses each year are gobbling up valuable acres needed to provide food and fiber for the future. If marginal land is forced into production, the cost of agricultural products will increase along with the damage to the resource base.

A "balanced, cooperative program" requires strong relationships between SCS and State, local, and other Federal agencies and other resource groups. We must work closely with them in identifying resource needs and implementing plans to protect and restore those resources. We must strive for more cooperation and coordination among agencies in addressing national priority needs.

SCS provides land users with technical assistance that "protects, restores, and improves" resources. Applying conservation systems protects the productive potential of farmland; restores damaged areas such as saline seeps and abandoned mined lands; and improves the quality of water by controlling erosion.

As we strive to achieve the Nation's potential productivity while protecting the environment, there is a greater sense of urgency for targeting assistance to problem areas. But we must also maintain conservation on those lands that do not now have critical problems.

Our new mission statement reflects our concern with both the quantity and quality of national resources and the role that SCS will play in the 1980's.

Cover: Burleigh Kay, SCS soil conservation technician for Ashland County, Va., instructs Boy Scouts on how to make miniature soil profiles at the 10th National Boy Scout Jamboree (see article beginning on page 7). (Photo, Tim McCabe, photographer, Information and Public Affairs, SCS, Washington, D.C.)

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Secretary of Agriculture

Norman A. Berg, Chief
Soil Conservation Service

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Conservation Education and Youth

O'Halloran and one of his students study the animals and plants that live on and under a tree stump.

Tulsa Teacher Teaches Students to Teach Students

by F. Dwain Phillips

Students teaching students may be a new approach in conservation education in many Oklahoma schools; but at Washington High School in Tulsa, it is only one of many innovations introduced by Tim O'Halloran.

O'Halloran is a 31-year-old teacher of biology, zoology, and ecology. He is a master at using the environment around the school as a classroom and everything in it as subject matter. His students' outdoor classroom is a 25- by 70-foot area squeezed between two classroom buildings. Currently, the students are working on more than 115 projects in the outdoor area. These projects range from studying the effect of shade on plant growth to counting bees leaving their hive to determine how temperature and weather conditions affect their activity.

"Not all projects go as they were planned," says O'Halloran, "but that's all right because we learn from them no matter what happens."

In the outdoor classroom, students study aquatic life in a pond, which is about 5 feet in diameter and has a fountain that circulates and recycles the water to keep it from getting stagnant. Students have planted cattails around the pond and placed fish and crawfish in it. The outdoor classroom also has a cactus garden; various kinds of trees, flowers, and other plants; rocks; stumps; and a variety of small snakes and lizards which students have released in the area.

During weekends in the spring, students go on field trips to a different part of the State or to another State. At least five of these trips are offered each year. The students camp out, and parents and teachers donate the use of vans to transport the students. The field trips are optional but are an integral part of classes. Students who don't take the field trips are assigned extra work such as a report on environmental studies or a research project carried out in the outdoor classroom.

Being careful not to disturb the environment or endanger animal or plant populations, students on field trips gather material to take to their outdoor classroom. The students study animal and plant habitats to determine which species will have the best chance of survival.

O'Halloran has requested help from the Tulsa County Conservation District and the Soil Conservation Service. The district has provided pamphlets and other materials and technical help with the projects. The district also donated to the outdoor classroom a sample of Indiangrass, the State grass of Oklahoma.

After O'Halloran's students gain experience in outdoor projects, they travel to nine elementary schools in Tulsa—some of which already have ongoing conservation education programs—to help the younger students set up their own outdoor classrooms and projects. According to O'Halloran, the student-teaching-student concept has worked well. The high school students enjoy what they're doing and continue to learn while they are teaching.

To give them a larger outdoor classroom, O'Halloran and his students are converting four old tennis courts on the schoolgrounds into an

outdoor study area. The Soil Conservation Service is providing advice on the type and location of a pond for the area, suggesting methods for erosion control, providing soils information, and recommending plants that would be suitable for the site.

Because of his interest and work in the conservation of natural resources, Oklahoma Governor George Nigh, upon recommendation by the Tulsa County Conservation District, recently presented O'Halloran with the Governor's Award for Conservation. This is the first time a teacher has received this award. O'Halloran is also the winner of the State and South Central Region Conservation Teacher of the Year award in the National Association of Conservation Districts–Allis-Chalmers Conservation Education Awards Program.

O'Halloran believes that his hard work is an investment in the future. As he puts it, "Young people need to know about nature, ecology, and conservation of natural resources to be responsible citizens."

F. Dwain Phillips,
public information officer, SCS, Stillwater, Okla.

Tim O'Halloran and some of his students release a small snake in the outdoor classroom.

Scouts Discover That Conservation Pays

Boy Scout Troop 28 in Rocky Grove, Pa., has found an imaginative way to make money while serving the cause of soil and water conservation. They are picking, cleaning, and selling seed from the 'Arnot' bristly locust, a hardy shrub used to revegetate strip mine sites. Because the seed must be picked by hand, it makes an excellent outdoor project for the troop.

"Last fall with the help of Troop 111 from Tippery, Pa., we sold 62 pounds of seed," said Larry Krug, one of the troop leaders. "We set our price at $20 a pound and no buyers argued. We're not in it to make a lot of money. It provides just enough good work to keep the boys active and outdoors. That's the Scout tradition."

The Scout's first contact with 'Arnot' bristly locust was in 1969 when the Soil Conservation Service released the shrub from a plant materials center in Big Flats, N.Y. Venango County, Pa., received 8,000 seedlings to plant on strip mined areas. SCS District Conservationist Karl Hellerick contacted Troop 28 to provide "boy power" for the planting project.

A few years later, the Scouts again became involved with the bristly locust, this time through the SCS Resource Conservation and Development (RC&D) Program. The Penn Soil RC&D Area paid the Scouts 3 cents for each seedling they planted. "Those hectic Saturdays of spring planting were a lot of work and sweat," said Lyle Cathcart, SCS district conservationist in Venango County, "but now they're paying off."

Each summer when the pods are

forming, the prime picking areas are examined for potential production. Preplanning is essential because problems can sometimes arise. The troop recently lost one of its best sites because the area was re-mined for coal.

A Scout can pick an average of one full bag of pods a day in a good producing area. When cleaned, a bag yields approximately 1.74 pounds of pure seed. But it doesn't come easy. The boys must wear heavy pants, shirts, and gloves to protect themselves from the plants and the pods. Climbing the steep slopes with a bagful of pods is a job in itself.

Separating the seeds from the shells is also a Herculean task. The troop has experimented with different cleaning methods, abandoning most of them because they were too slow and wasted too much of the valuable seed. The method they use now is to stomp on the bags with their feet and pound the bags with baseball bats. Wire mesh and fans are used to separate the seed from the chaff.

Perhaps the most noteworthy aspect of Troop 28's seed selling activities is that the troop did not become involved to earn money, but to do a good deed. The Scouts were not paid for the first set of shrubs that they planted, and they did not know that a profit lay ahead. They only wanted to help conservation efforts in their county.

Now the Scouts are reaping what they have sown. Some of the Scouts not only earn the $54 it takes to go to summer camp, but earn extra money to buy uniforms, scouting books, and other scouting equipment.

"The troop bought a six-man tent with some of the money," says Dick Eakin, another Scout leader. "In 1979, the troop grossed $1,181.80," says Krug. "Two-thirds of this money went directly to the Scouts for their scouting expenses. And, like fishing, this work teaches patience."

Combining community service with a profitable endeavor is a way of life for the Boy Scouts of Troop 28.

Plantings by Boy Scouts Control Erosion and Save Money

The Warren A. Hood Boy Scout Reservation near Hazlehurst, Miss., faced a critical erosion problem from wave action along the levee of its 110-acre lake in 1975. The lowest bid for installing rock riprap to prevent further damage was $80,000, almost as much as it had cost to build the levee 3 years earlier. Lacking money for the project, local officials of the Boy Scouts' Andrew Jackson Council went to the Copiah County Soil and Water Conservation District (SWCD) for help in finding an alternative solution.

The Soil Conservation Service, working through the Copiah SWCD, recommended planting 'Halifax' maidencane, a semi-aquatic grass adapted to wet areas, to stabilize the levee. SCS obtained sprigs of the maidencane from the plant materials center (PMC) at Coffeeville, Miss., to do the job. Boy Scout Troop 186 from Hazlehurst planted rows of the sprigs at 1-foot intervals along the more than 1,300-foot-long levee. By the middle of the second growing season, the plantings had spread and were providing complete protection from erosion by wave action at a tremendous savings to Scout officials.

"The maidencane has been doing an outstanding job," says Clinton Stephens, camp ranger. "It grows only 2 or 3 feet tall, so it requires no clipping or other maintenance. And we haven't had any problems with it spreading to shallow areas of the lake."

'Halifax' maidencane was tested at the Coffeeville PMC and released in 1974 by SCS and the Mississippi Agricultural and Forestry Experiment Station.

Bennie Hutchins,
district conservationist, SCS, Hazlehurst, Miss.

Dr. Guy D. Smith, *Soil Taxonomy* Author, Dies

Dr. Guy D. Smith died on August 23. He developed many of the concepts on which *Soil Taxonomy,* the first nationwide system of soil classification, is based. The taxonomy is a basic tool for making and interpreting soil surveys. It has led to improved understanding of soils worldwide and the value of soil information in planning the use, management, and conservation of land resources.

Dr. Smith was director of soil survey investigations in the Soil Conservation Service for 20 years. He received a Distinguished Service Award from the U.S. Department of Agriculture in 1962. After his retirement in 1972, he was affiliated with the University of Ghent in Belgium.

Improved Playing Fields Reduce Football Injuries

Public schools in eastern Oklahoma are greatly reducing football injuries by improving their playing fields. The Soil Conservation Service, working through soil conservation districts, is helping the schools to improve and maintain the fields.

After the 1979 football season, the field at the Arkoma Public School in Leflore County was rough and uneven and had little grass cover. Small rocks had worked their way to the surface.

"Our players suffered many groin pulls, ankle problems, and shin splints," says Arkoma's Coach Gary Montgomery. Assistant Coach James Goddard says, "Our team preferred to play on other fields because none was as bad as ours."

Bill Gupton of the Arkoma Athletic Booster Club contacted the local SCS office for help. Working through the Leflore County Conservation District (CD), SCS District Conservationist Kenneth Ferguson provided soil information and helped develop some alternatives for improving the fields.

The school decided on a plan and, with the help of the booster club and local citizens, work began in spring 1980. J. L. Henry, Jr., a local farmer, donated enough sandy loam topsoil to cover the field. He also donated the use of a truck and a tractor for hauling and spreading the topsoil. The school paid for sprigging the field to bermudagrass, for fertilizer and chemical weed control, and for the purchase of a new mowing machine. The booster club bought a sprinkler system. Roy Dix, a school employee, watered, mowed, and cared for the field during the summer. At the beginning of the 1980 football season, the field was in great condition, and Arkoma had an injury-free season that year.

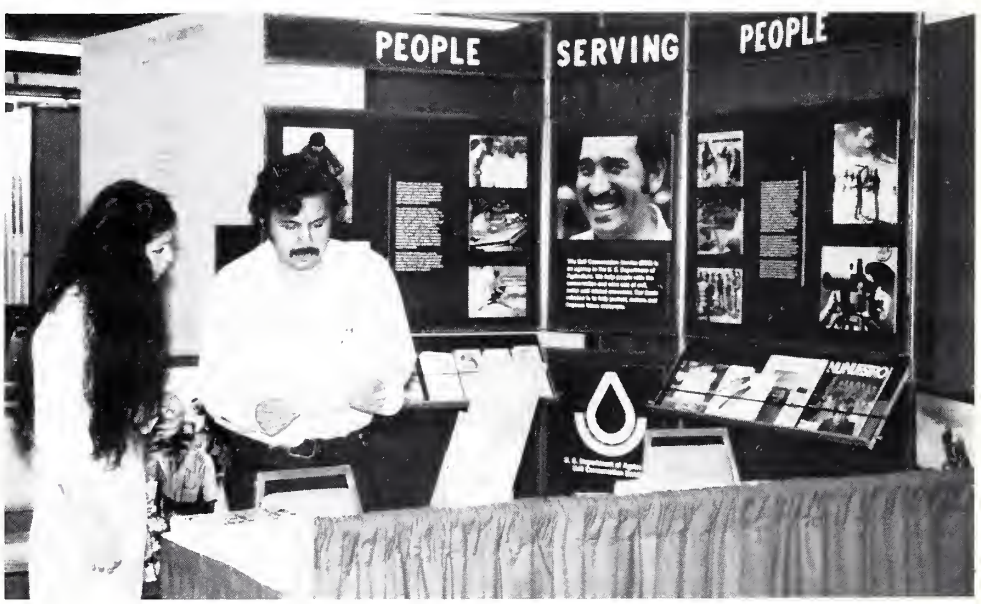
Encouraged by the success in improving football fields at the Arkoma school and five other schools in Leflore County, the conservation district purchased a machine for aerating the turf. The district rents the machine to county schools to use in treating their playing fields in winter. The machine removes small cores of soil from the turf. When rain fills the small holes left behind, the expansion and contraction of the water as it freezes and thaws helps to break up the soil compaction that occurs during the playing season.

With problems on the football fields solved, SCS and Leflore County CD are directing their efforts at solving other erosion and vegetation problems on areas of the schoolgrounds.

F. Dwain Phillips,
public information officer, SCS, Stillwater, Okla.

SCS Sponsors Exhibit at Youth Career Day

Russ Almaraz, Soil Conservation Service soil scientist from the Medford, Oreg., field office, discusses career opportunities with a visitor at the SCS exhibit during the National IMAGE Convention's Youth Career Day. IMAGE, a national organization concerned with the employment of Hispanic Americans, held its 1981 national convention in Portland, Oreg., last June.



Scouting Out Conservation at the Boy Scout Jamboree

by Tom Levermann

Armies of the Union and Confederacy crisscrossed the roads and fields around Bowling Green, Va., during the Civil War. During 10 days late in July and early August 1981, an "army" of more than 33,000 Boy Scouts, Scout leaders, and nearly 200,000 visitors invaded the same area for the 10th National Boy Scout Jamboree.

The theme of the 1981 Jamboree was "Scouting's Reunion With History." Beginning on July 27, the Scouts participated in programs and activities designed to reinforce their commitment to Scouting ideals and broaden their understanding of many issues facing modern society. Major topics included conservation of natural resources and environmental improvement. On a 70-acre site, 15 State and Federal agencies, including the Soil Conservation Service, constructed special displays and conducted continuous resource conservation programs.

The theme of the SCS exhibit area was "Conservation Is Your Future." More than 13,000 Scouts and 8,000 visitors toured the area, learning ways to conserve natural resources beginning in their own yards.

At the first SCS exhibit, Scouts poured water from a watering can to simulate rainfall on three soil erosion boxes. One box contained bare soil, another contained soil with a mulch cover, and the third contained soil covered with sod. The Scouts could see that a vegetative cover reduces soil erosion and improves water quality.

The Scouts and visitors moved on to a garden where crops such as corn, potatoes, and beans were being grown. A diversion and grassed waterway at the garden site showed the Scouts conservation practices providing onsite erosion control and how these practices are related to agriculture.

Far left, Richard Shockey, SCS district conservationist for Easton, Md., asks how many Scouts have gardens at home. He explained the usefulness of the compost pile in the foreground as a good way to recycle leaves, grass clippings, and other organic matter. Near left, two Scouts pour water over a soil erosion box to see how much soil erosion occurs if the soil is covered with mulch.

At the next exhibit, the Scouts made their own miniature soil profiles by filling 6-inch plastic tubes with small amounts of bedrock, parent material, subsoil, and topsoil. The soil profiles were popular mementos of the SCS area—with many Scouts returning to build additional ones—reminding the Scouts of the importance of protecting this vital natural resource.

At the last exhibit in the SCS area, the Scouts compared two model homesites. One site showed a neglected house and yard. The house was built on soils incapable of supporting the weight of the house, as shown by the cracked foundation. Soil erosion was evident at the base of an improperly installed downspout and on a slope with inadequate grass cover. Adding to the imaginery homeowner's woes was the malfunctioning septic system, which was located in unsuitable soils.

The other model homesite showed a well-maintained yard with a good grass cover, a diversion built to keep water away from the home and to keep the basement dry, and a variety of plantings to attract wildlife and beautify the site. The house was situated to make the best use of a solar panel on the roof.

The SCS area was popular with the Scouts, and other visitors were very complimentary, including Secretary of the Army John O. Marsh, who said, "It's obvious that SCS has done a lot of work."

Another major feature of the Jamboree was the Merit Badge Midway, where nearly 100 agencies and organizations provided instruction in many of the merit badges Scouts can earn. A special visitor to the SCS area and the Hanover-Caroline Soil and Water Conservation District booth on the Midway was King Carl Gustaf of Sweden. The district

Above, Scouts make their own miniature soil profiles in plastic tubes. At right, Scouts compared the homesite with a neglected house and yard (top) with the homesite showing good grass cover, a diversion, and plantings for wildlife (bottom).

booth was one of only three that the King wanted to visit. As a conservation leader in his country, the King was particularly interested in the role of conservation districts in resource conservation.

For Scouts, the district provided instruction on earning the soil and water conservation merit badge. After completing the requirements and having an official of the Scout's local conservation district certify that the Scout did complete all requirements, the Hanover-Caroline District will provide a conservation patch, designed especially for the 1981 Jamboree.

Conservation and outdoor activities play a big role in Boy Scout programs. The Jamboree provided opportunities for Scouts to meet with people from many resource agencies and to gain a better understanding of environmental and resource management. Regarding the SCS area, one Scout from Virginia said, "This kind of demonstration helps me better understand conservation and how everything in the environment fits together."

Tom Levermann,
educational relations specialist, Information and Public Affairs, SCS, Washington, D.C.

At left, Judy McNelis, soil conservationist for the Hanover-Caroline Soil and Water Conservation District, encourages Scouts to feel the differences in soil textures. At right, a Scout gets a close look at an engineer's level, which SCS uses in laying out tile lines, ponds, and terraces.

Rural Know-How Solves City Problems

by Hubert W. Kelley, Jr.

Kurt D. Mason, an unflappable young man who is as much a product of rural Kentucky as corn and bluegrass, today is applying his farm experience to help city and suburban people protect and manage their soils.

Mason is Soil Conservation Service district conservationist for two Kentucky counties along the Ohio River—Jefferson and Oldham. Jefferson County includes the nearly 300,000 residents of Louisville and another 700,000 people who live outside the city limits. Oldham is still largely rural but is starting to get suburban spillover from Louisville.

"I grew up on a farm, I trained with SCS on farms, and last year I worked in a farm county with a population of 15,000," says Mason. "This year my conservation districts serve 1 million people and my office overlooks a shopping center. It's a brand new job."

Are city people so different from rural people?

"Their experience is different. Rural people, for example, are aware of differences in soil. City people have to be taught that one soil is not necessarily like another and that all can't be treated alike."

The most serious conservation problem around Louisville is soil erosion on construction sites, with losses averaging at least 40 tons per acre per year, more than double that on eroding cropland. Both Mason's counties now have anti-erosion ordinances, which help keep losses from running higher.

In Jefferson County, a land developer has to send a plat map of his proposed project to the county planning commission, which promptly sends a copy to the conservation district. Mason then opens his soil survey and identifies all soils in the proposed tract, along with percent of slope. He also indicates the degree of limitation for each soil for all the various uses the developer has in mind. Fortunately for planners, modern soil surveys have been published for both Jefferson and Oldham Counties.

Step two in Mason's review of a developer's plans includes suggestions for erosion and sediment control measures, including temporary cover, diversions, debris basins, and proper land grading. The developer is informed that standards and specifications for the measures are available from the conservation district. If seeding is required, Mason recommends the proper mixture and works with the developer to get the job done right.

Mason also reports on depth to seasonal water table and other limitations on construction. If his findings are unpromising, the county planners may put an end to a developer's plans then and there.

Is the job challenging or frustrating?

"Both," says Mason. "When Conservation Technician Ron Phillips and I can find ways to help people, the work is a challenge; when it is too late to help, it is certainly frustrating. When the phone rings and a woman tells us that a landslide has just covered up her backyard, that's frustrating. And there is little satisfaction in telling a family with a $120,000 home that there isn't much they can do about an expanding sinkhole in the front lawn."

Both landslides and sinkholes are problems around Louisville. Often, slides are caused by a developer removing the soil from the base of a slope to make room for a house. Many of these slopes are already unstable, according to Mason, with only 18 inches of soil over rock.

Sinkholes, which often start as small depressions in the lawn, may grow into holes 6 feet across. It is practically impossible to tell in ad-

Kurt D. Mason shows erosion of one of his district's problem soils—Crider silt loam. Wherever it is unprotected, it melts away during a single season of rain.

vance where one will occur.

Another unresolved problem stems from changing storm runoff as a result of paving over soil. A large pasture on Cedarbrook Farm, owned by Norton Cohen, was for many years adequately drained by a grassed waterway down the middle. Then two interstate highways and an interchange were constructed near the farm. Thousands of additional tons of water were suddenly funneled through the Cedarbrook pasture.

"The grassed waterway washed out," reports Mason, "and was replaced by a gully that is getting deeper every year. The pasture is too dangerous for horses now; they have to be fenced out."

While Cohen is eligible for cost sharing to heal the gully, the $3,500 maximum limit is inadequate to cover his costs.

Much of the land swallowed up for the suburbs of greater Louisville is first-class cropland, but the push of population outward is inexorable. "To some city people, this represents progress; but to someone like me who grew up on a farm, the loss of so much good cropland is painful," reports Mason.

A major built-up area today, for example, is the St. Matthews district, with deep, well-drained soils that used to grow bumper crops of white potatoes. Today there is still a well-attended St. Matthews Potato Festival—but no homegrown potatoes.

Besides meeting the demands of an urbanizing area, Mason also works with local farmers. There are still 1,200 farms, even in Jefferson County, but an increasing number of farmers are part-timers with from 5 to 15 acres.

"They have high hopes but tend to expect too much from the land," notes Mason. "They want to treat the whole tract as agricultural land. They want to have vegetable gardens and to graze cattle and perhaps a horse; they all want a pond, without regard to the suitability of the soil."

The board of the Jefferson County Soil Conservation District is farm-minded. All seven supervisors are engaged in agribusiness, and the chairman is a dairy farmer. But for a district with so many problems, the budget is painfully small. In 1982, the combined income from all sources—including rental of a district-owned bulldozer and attachments—will be around $11,000. Among other things, this modest income pays the salary of district Clerk Donna Ford.

"With so many of the immediate problems defying solution," adds Mason, "I work all I can with local schools to help teach the young people the importance of basic resources and of managing and preserving them."

A recent boost came when Black Horse Acres, a 180-acre general farm, was deeded to the Jefferson County school system for use as an outdoor classroom. Black Horse Acres has a full-time farm manager, and a conservation system is an integral part of the operation.

"Soil science and soil conservation have as much application around an expanding city as they do in a farming community," concludes Mason. "Maybe more. Mistakes in a county of a million people are much more expensive to correct than they are on a farm. It's my job to help prevent as many mistakes involving soil use as is humanly possible."

A deep gully cuts a pasture in two on Cedarbrook Farm, south of Louisville, Ky. It was created in three seasons by excess runoff from nearby highways and an interchange.

Hubert W. Kelley, Jr.,
director, Information and Public Affairs, SCS, Washington, D.C.

Twin Lakes Park Improved for Handicapped

by Nevin Ulery

Like many parks across the country, Twin Lakes Park in Westmoreland County, Pa., had about everything a 350-acre recreation area needed: two well-stocked fishing lakes, picnic pavilions, playgrounds, restrooms, parking areas, a nature center, an environmental library, and hiking and bridle trails. The park provided everything except facilities to accommodate the handicapped.

The "handicapped" or the blind, crippled, retarded, and elderly citizens make up approximately 20 percent of the population of Westmoreland County. Most are not able to enjoy typical recreational facilities.

To alleviate the problem, the Westmoreland County commissioners with the assistance of the Soil Conservation Service—working through the Resource Conservation and Development (RC&D) program—planned, designed, and installed three wooden fishing decks, hard-surface trails, paved parking areas, hand rails, directional signs, and other safety devices to accommodate the handicapped. Existing restrooms, water fountains, and picnic tables were also modified.

Local citizens contributed funds to help the county defray the cost of installing the new facilities. These gifts ranged from $5 to $1,000. Fifteen individuals and groups contributed $2,849. Much of the work was done by the county using RC&D cost-sharing funds.

Since their completion 3 years ago, many compliments have been given to the handicapped facilities at Twin Lakes.

According to Vince Curtis, program administrator for the Westmoreland County Society for Crippled Children and Adults, "The improvements have made the park more accessible not only to the young, but also to the handicapped adult, who before his disability might have been an avid sportsman or might have enjoyed family outings."

County Parks and Recreation Department officials are so pleased with the results at Twin Lakes that they have made similar improvements in other county parks.

Nevin Ulery,
RC&D coordinator, Penns Corner RC&D,
SCS, Monessen, Pa.

International Year Heightens Awareness

The General Assembly of the United Nations has declared 1981 the International Year of Disabled Persons, with this objective: to encourage the full integration and participation in society of the estimated 450 million people on Earth who suffer from some form of physical or mental impairment.

In the United States, an interagency council is working to heighten public awareness of the rights, capabilities, achievements, and needs of disabled persons. For information on the council and how you can help, write or call Harold O'Flaherty, Executive Director, International Year of Disabled Persons, 330 C Street, S.W., Room 3124, Washington, D.C. 20201. Telephone: (202) 245-0170.

Activities at USDA

For its own part, the U.S. Department of Agriculture plans to: continue to modify its buildings and facilities to make them more accessible to employees and the public; recruit handicapped personnel; establish talent and skill banks in each agency personnel office; and provide information to training officers, placement coordinators, and managers on the training needs of handicapped employees.

The Department is also considering: providing special equipment for handicapped patrons using the agricultural library; producing some of the Department's most popular publications in braille or cassette tape editions; and entering into a contract with the Register of Interpreters for obtaining interpreting services on a regular basis.

The Rehabilitation Act of 1973 prohibits discrimination against the handicapped in employment or delivery of services by any activity receiving Federal funds. During the year, USDA will hold training conferences for employees on the provisions of this law.

Reprinted from the June 1981 issue of
Food & Nutrition.

News Briefs

SCS Issues Revised Public Participation Policy

The Soil Conservation Service issued a revised six-page public participation policy statement in June and expects to publish a handbook to help SCS employees apply the public participation guidelines.

The new policy statement retains the philosophy established in the initial statement but is more explicit than the one which was issued in 1978. The significant changes are clearer statements of responsibility and the encouragement of conservation district officials to take a more active role in public participation activities.

The revised policy statement reflects some of what SCS learned from working closely with the public during the planning required by the Soil and Water Resources Conservation Act (RCA) of 1977. For example, a new guideline describes SCS's broad view of the public, going beyond the cooperators that SCS primarily serves to include others who are interested in conserving the natural resources of their communities.

SCS has a history of public participation that dates back at least to 1937 when States established soil and water conservation districts, which provide a local forum for public discussion of issues that concern SCS.

The National Environmental Policy Act (NEPA) of 1969 and other laws further increased the level of public participation in SCS.

This year, SCS Chief Norman A. Berg and the heads of five other Federal agencies signed a memorandum of understanding to coordinate certain public participation activities. The natural resource agencies will share plans for public meetings, as well as public participation handbooks, guidelines, and programs.

Berg recognizes the influence of the public's viewpoints on SCS decisions in RCA planning, small watershed projects, and other SCS programs, and will continue to actively seek those viewpoints to guide SCS policymaking.

Ida D. Cuthbertson,
public participation coordinator,
SCS, Washington, D.C.

World Food Day Observance Set

The Food and Agriculture Organization (FAO) of the United Nations has established the first World Food Day, October 16, 1981. Groups participating in a newly formed National Committee for World Food Day represent farm, consumer, religious, labor, academic, health, trade, anti-poverty advocacy, and world relief and development organizations concerned with food and hunger issues at home and abroad.

Patricia Young, coordinator of the committee, said, "World Food Day gives us a chance to consider hunger in America, our children's changing diet, the loss of family farms, what to do about food price inflation, and the loss of land from erosion and urban sprawl."

More than 500 million people in the world today suffer from severe hunger, with children the most seriously affected. Young said observances in the United States will be an occasion for Americans to examine the causes and consequences of hunger at home and abroad, as well as to evaluate the strengths and weaknesses of the American food system to respond to the problem.

"We can't forget that American agriculture is the world's last defense against famine," Young said. Observances of World Food Day are planned in more than 80 countries, according to FAO officials.

On-Site Sewage Treatment Symposium to be Held

The Third National Symposium on Individual and Small Community Sewage Treatment sponsored by the American Society of Agricultural Engineers will be held on December 14–15 in Chicago. The symposium will deal with the old problems of sewage disposal and the new developments in handling human and household waste. Topics to be discussed include: septic tank solids and gray water, site evaluation and system selection, treatment capability of soils, environmental effects, system operation and maintenance, and new technology. The Soil Conservation Service is one of 14 cosponsors of the symposium.

CONSERVATION Research Roundup

Bottom of Lake Is Back on Top

After years of erosion, tons of Illinois topsoil have been retrieved from Lake Paradise and are back in the business of producing corn.

University of Illinois scientists have completed the first phase of reclaiming the lake near Mattoon. Sediment has been removed from the water and spread on test plots where corn has been planted. The researchers are waiting to evaluate 1981 yields.

This process will put recreational life back into the lake and will provide topsoil for badly eroded land which no longer produces well, said University of Illinois Agricultural Engineer Walter Lembke.

Located 3 miles southwest of Mattoon, Lake Paradise was built in the early 1900's to provide a water supply to the city, but it no longer serves this purpose.

Lembke estimates that the lake catches 10,000 tons of sediment from erosion every year. These deposits have crowded the lake's original 160 acres into 120 acres.

The scientists are studying two methods of distributing the sediment. Dry sediment already has been spread over farmland where the corn has been planted. Crews now are pumping water from the lake to evaluate a different method.

Sediment is being removed with a hydraulic dredge and pumped behind terraces where water is being drained from the soil. Lembke said this method could be economical if the dewatering process does not keep the land out of production for more than 1 year and if yields are increased.

Lembke believes that someday sediment may be pumped from publicly owned lakes to bordering farmland. The University of Illinois Agronomy Department has found that the sediments are high in plant nutrients such as phosphorus, potassium, and calcium. Because they are neutral to slightly alkaline, the land would not require liming.

The University of Illinois is conducting the study in cooperation with Water Resources Center, Illinois State Water Survey, Lake Land College, the Illinois Department of Agriculture, and Dodson Van Wie Engineers, Ltd.

Grazing Systems Impact on Income

Five grazing systems on the Texas Experimental Ranch in the Rolling Plains were evaluated in two studies for impacts on annual net income (expressed in 1979 dollars) for the periods 1961–74 and 1970–74. Scientists with the Texas Agricultural Experiment Station found that for a cow-calf operation, over the 14-year period, a heavily stocked, continuously grazed system which received supplemental feed, averaged $11.55 per acre per year return to land and management. This represented 27 percent more annual net income than the next best, moderately stocked grazing system.

During the last 5 years of the study, annual net income of the heavily stocked system decreased to an 11-percent advantage. However, stability of annual ranch income over time was improved when heavily and moderately stocked grazing systems were jointly utilized on the ranch. Winter supplemental feed was more important as an annual income stabilizer than it was as a means to increase net income. A four-pasture, deferred-rotation grazing system produced $9.09 per acre, the highest average annual net income of all moderately stocked systems. The four-pasture system was showing a steady increase in importance as a net income producer and stabilizer.

Loblolly Pine on Mine Spoil

University of Tennessee forestry researchers Tom Simpson and Edward Buckner have developed improved techniques for establishing loblolly pine on surface mine spoil.

They found that inoculations of seedling roots with a mycorrhizae-forming fungus that improved nutrient uptake resulted in increased survival and growth on mine spoil in Morgan County. But fertilization at planting time reduced survival, as did establishing a dense grass cover.

Another study showed that once loblolly pine trees are established—2 or 3 years after planting—fertilization with nitrogen and phosphorus improved growth. Liming to correct the highly acid spoil condition was beneficial only where trees were not mycorrhizal. This indicated that mycorrhizae enable more efficient nutrient uptake under acid spoil conditions than is possible where they are absent.

New Publications

Assessment of Erosion

Edited by M. DeBoodt and D. Gabriels

This book is based on the Workshop on Assessment of Erosion in America and Europe, which was a followup to two previous meetings held at the Food and Agriculture Organization Headquarters in Rome, Italy. The aim of this meeting was to examine the possibilities for assessing degrees of soil erosion and for measuring quantitatively its effect on soil productivity, the ultimate objective being the production of a world map of soil degradation. The papers presented at this workshop were not meant primarily to add to the existing collection of erosion studies but to provide syntheses of the different approaches being developed in the institutions where there was the most experience.

This volume draws attention to the dangers facing people in allowing soil degradation to continue on its present scale and provides background data for assessing and mapping the degree of degradation and developing methods for overcoming and, where possible, preventing it. This work is of interest to soil scientists, agricultural scientists, and botanists.

This book is available for $80.50 plus postage, from John Wiley & Sons, Inc., Order Department, One Wiley Drive, Somerset, N.J. 08873.

Soil Conservation—Problems and Prospects

Edited by R. P. C. Morgan

This book is based on the proceedings of the International Conference on Soil Conservation, "Conservation 80," held at Silsoe, Bedford, United Kingdom, in July 1980. The conference provided a forum for the exchange of ideas and experiences between agricultural engineers, geomorphologists, pedologists, foresters, economists, and extension workers. It brought together contributions from those working in universities and research stations and those directly concerned with implementing soil conservation in the field.

The papers presented in this volume provide an up-to-date assessment of soil conservation measures, stressing the problems of applying these measures in practice and the possible solutions. Four themes are covered: the use of erosion risk assessments and land classification in soil conservation design; empirical studies of soil conservation measures; the inclusion of conservation practices in erosion models; and economic, social, and legal aspects of soil conservation.

This book is a followup to *Assessment of Erosion.*

This book will be of interest to those agriculturalists, agricultural engineers, soil scientists, agronomists, foresters, geographers, and hydrologists employed in soil erosion evaluation and soil conservation practice. It is also intended as a reference work at graduate or post-graduate level for teachers and students of soil conservation.

Copies of this publication are available for $61.95 plus postage from John Wiley & Sons, Inc., Order Department, One Wiley Drive, Somerset, N.J. 08873.

Soils and Agriculture

Edited by P. B. Tinker

This report is the second volume in a series of reports sponsored by the Society of Chemical Industry. The series, *Critical Reports on Applied Chemistry,* is designed to review the subjects within the Society's range of interest. The emphasis is on critical assessment; but as the series develops, it is expected to provide a unique overview of scientific and technological developments affecting the chemical industry.

The subjects of this report have been selected on the basis of their current interest. Each of the four chapters has been written by experts in their respective fields. Recent work in the subject is reviewed and new and future applications which may lead to improved crop yields are described. At the end of each chapter are a few concluding paragraphs and a list of references cited.

This book is available for $27.95 plus postage from Halsted Press, A Division of John Wiley & Sons, Inc., 605 Third Avenue, New York, N.Y. 10016.

Seventh Annual Report on Great Lakes Water Quality

by the International Joint Commission

This report marks the transition between the Commission's activities under the 1972 Great Lakes Water Quality Agreement and those under the 1978 Agreement.

This report gives an overview and a lake-by-lake description of the water quality in the Great Lakes Basin during 1978 with an indication of some broad changes that have occurred since 1972. It provides comments and recommendations stemming from an assessment of progress under the 1972 Agreement. A range of problems arising from industrial and municipal dischargers to the lakes are addressed, including toxic and hazardous substances and hazardous waste disposal; phosphorus and eutrophication; the long range transport of airborne pollutants; and radioactivity.

A limited number of single copies are available from the International Joint Commission, 1717 H Street, N.W., Suite 203, Washington, D.C. 20440.

70 Years of Accomplishment

by the International Joint Commission

This report gives a brief history of the IJC and follows with more detailed information on the IJC's accomplishments in 1978-79. The main topics are water quality, water levels and flows, and air quality. Numerous color photos are scattered throughout the report and a fold-out map shows the projects and areas they cover.

A limited number of single copies are available from the International Joint Commission, 1717 H Street, N.W., Suite 203, Washington, D.C. 20440.

Pest and Disease Control Handbook

Edited by Nigel Scopes

This handbook is essentially an updating and revision of the fifth edition of the *Insecticide and Fungicide Handbook,* published by the British Crop Protection Council. It is intended for all who are interested in the practice and technical aspects of the subject. Although written specifically for the use of pesticides in Great Britain and Northern Ireland, much of the basic information it contains is of general applicability. Each chapter has been written and compiled by authorities in their respective fields.

The text is designed for easy reading, and rates of pesticide use have been set in italics for quick and ready reference. Lists of Latin names and common names of both pests and diseases have been included at the end of each chapter. Some of the topics in the book are: safe and efficient use of pesticides; application of pesticides; and pests and diseases of cereals, grass, vegetables, fruit, and greenhouse crops.

This book is available for $40 from British Crop Protection Council Publications, 74 London Road, Croydon, England CRO 2TB.

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Meetings

October	3-6	Farm and Industrial Equipment Institute, Hot Springs, Va.
	4-8	American Association of State Highway and Transportation Officials, Chicago, Ill.
	4-9	Water Pollution Control Federation, Detroit, Mich.
	7-8	Agricultural Research Institute, Washington, D.C.
	7-9	Hardwood Plywood Manufacturers Association, Vancouver, British Columbia, Canada
	10-15	National Environmental Sanitation and Maintenance Educational Conference, Clearwater Beach, Fla.
	11-14	American Forestry Association, Santa Fe, N. Mex.
	22-25	National Association of Biology Teachers, Inc., Las Vegas, Nev.
	25-29	Congress for Recreation and Parks, Minneapolis, Minn.
	26-30	American Society of Civil Engineers, St. Louis, Mo.
November	2-5	Geological Society of America, Cincinnati, Ohio
	8-11	National Agricultural Bankers Conference, Washington, D.C.
	8-11	National Association of State Universities and Land Grant Colleges, Washington, D.C.
	8-11	National Forest Products Association, San Diego, Calif.
	8-12	American Institute of Chemical Engineers, New Orleans, La.
	9-16	The National Grange, Spokane, Wash.
	12-14	Future Farmers of America, Kansas City, Mo.
	15-18	American Society of Farm Managers and Rural Appraisers, Louisville, Ky.
	21-24	American Society of Landscape Architects, Washington, D.C.
	29-Dec. 4	American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, Atlanta, Ga.
December	1-3	National Farmers Organization, Indianapolis, Ind.
	1-3	Western Forestry Conference, Sun Valley, Idaho
	7-11	American Society of Agricultural Engineers, Chicago, Ill.
	7-11	Symposium on Surface Mining Hydrology, Sedimentology, and Reclamation, Lexington, Ky.

Recent Soil Surveys Published

by the Soil Conservation Service

Alabama: Lee County.
Arizona: Ft. Apache Area.
Arkansas: Boone County and Pope County.
Colorado: El Paso County Area.
Idaho: Camas County Area and Kootenai County Area.
Indiana: Monroe County.
Kansas: Linn and Miami Counties.
Mississippi: Lafayette County.
New Mexico: Otero County.
Ohio: Madison County.
South Dakota: Douglas County and Walworth County.
Texas: Bee County, Brazoria County, Hidalgo County, and Tarrant County.
Virginia: City of Suffolk.
Wyoming: Fremont County.

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